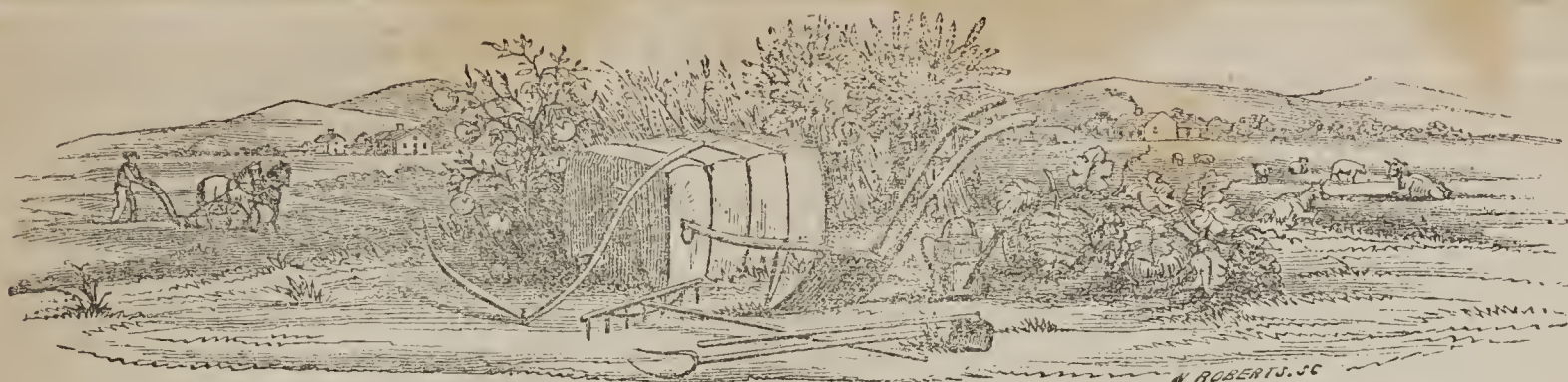


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FARMER AND PLANTER.

DEVOTED TO AGRICULTURE, HORTICULTURE, MECHANICS, DOMESTIC AND RURAL ECONOMY.

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Although we have given through the columns of our paper, much information on hill-side ditching, the following article, which we extract from the Soil of the South, will no doubt much interest many of our readers.

We would remark on the subject of the level and plumb line that we use the latter in preference to the former as used by the writer. The effects of the wind may be prevented by boxing the line with any very light material. One invariable rule must be observed in delivering your water, which is to point the descending end of the ditch up the stream, ravine or gully into which it is to be discharged—otherwise the ditch cannot be got down without giving it too much fall. The plan of horizontalizing between the ditches, is no doubt a good one, but on account of the trouble and difficulty attending its accomplishment, is practiced by but few with whom we are acquainted. Some plowing according to the shape of the field, regardless of the direction of the ditches, which the plow must be lifted over at whatever point arrived at—this plan we much dislike for obvious reasons. Others plow in the direction of a ditch commencing on the upper side of one and finishing on the lower side of the next above it. Others again commence on the lower side of the upper ditch, and finish on the upper side of the next below it. This we prefer to the former, as it admits of the short rows if

any bending in the upper side of the lower ditch, which should be so formed (gradually sloped above) as to allow the horse to walk into it—thus answering as both a ditch and turn row; but farmers and planters, be certain to make the ditches plough as you may between them.—EDS.

Premium Essay on Hill-side Ditching—
Read before the second Annual Fair of the Georgia and Alabama Agricultural Society.

BY NELSON CLAYTON.

In performing this indispensable work for the preservation and improvement of land, there is great diversity of opinion as to the best manner in which it is to be done—differing, too, as to the most essential points. But this difference is the result, in a great degree, of the diversity and irregularity of our hills, knobs and valleys, as well as of the nature of the soil. If all our land requiring hill-side ditches were a perfect inclined plane, with the same grade from top to bottom, perhaps this difference would not exist—or if it did, it would be much easier to ascertain and correct the errors and establish something like a uniform system. Under the many disadvantages by which the work is surrounded, all that can be done is to lay down some general rules, leaving the balance to the experience and practical sense of the operator. "In a multitude of counsel there is safety." I will therefore give here the result of several years' experience and close observation, prefacing it with the hope it may be found of some little service to some one desirous of information upon the subject—not claiming for my essay any thing on account of literary merit.

The frame with which I work is made

of two pieces of plank nine feet long, three and a half inches wide, three-quarters of an inch thick. Fasten the upper ends of the planks together in the form of a compass, or rafter, placing the lower ends of each piece (this can be varied, however, to suit the height of the person who is to carry the frame) attach two small slips of plank (one inch and a half by five-eighths) upon opposite sides across them, which are to act as a support for the water or spirit level, as well as to fasten the two arms of the compass or frame together, and make them steady. It will also be better to fasten these two narrow strips together in two or three places to make them more firm. On the middle of these two narrow strips is fastened the level. There can be no doubt of its superiority over the plumb-line on account of its requiring less time to use it, particularly on a wintry day.—The frame can now be taken to some place that is perfectly level, and by reversing the ends, ascertain that it is right. If it is not perfectly level, it can be made so by moving one end of the cross slat up or down. After this is done mark on the level the exact point at which the vacuum stands—then elevate one end of the frame one, two, three and four inches, and mark upon the level each time as at first. Now get at least one hundred small canes or sticks about eighteen inches long. You will have some one (a small boy will do) to carry the sticks. He should walk on the opposite side of the frame and place one in the ground a few inches back of the foot of the frame, upon the same side that he is on, so that in moving the frame for another stride, you can place the back end or foot exactly where the front one stood.

The fall or grade to be given to the ditch depends upon the length—whether it is straight or crooked—the quality of the soil, and to some extent the grade of the hill. I will give, for instance, the grade to be used upon gray land, having a light sandy or gravelly clay foundation, as it is much the most difficult. If the ditch is to be two or three hundred yards long, nearly straight, with only long and gentle curves, the first stride of fifteen feet, at the upper end, should have four inches fall—the next three—and then the first hundred yards should have two and a half inches fall to every fifteen feet. The second two, and the third hundred yards should have only one and a half inches fall to the fifteen feet.—The velocity gained by water in running any distance makes it necessary that the grade or fall should be diminished about this proportion to the length of the ditch. If however, the ditch should be very crooked, add a half inch, and in extreme cases even more than that to the rate of fall. At very short crooks for the first stride below, add as much as an half inch, for the purpose of carrying off the sand that would otherwise accumulate at such places. If the ditch should be perfectly or nearly straight as much as one hundred yards, the fall might be the same as the rate given above for straight ditches. Upon steep hill-sides the ditches require more fall than where they are only moderate. This is necessary to prevent them from filling up, on account of the force with which the water and sand come into them; for let your ditches be ever so close together, in very hard rains there will be some sand washed in from above. I have some short ditches on very steep hill-sides, as much as from three to five inches.

These grades, or this work, to the inexperienced, may appear complicated, but not so with the experienced. It takes but little practice, accompanied with good judgment, for any one, by looking at the land, to tell whether the ditch will be straight or crooked, long or short; and if he should sometimes be mistaken, it is better to run it off again than suffer it to remain wrong—for to make the fall greater or less is a very easy matter when your level is marked as before directed.

The only difference between the grading or fall, given the ditch in red stiff land, or where there is a good clay foundation, and the above, is that the fall

may be made greater, for the reason it is less liable to wash.

In commencing to ditch you will first take a general view of the land. Perhaps from some local cause there is some particular place where a ditch should be—or some starting point (either above or below) where, above all others, there should be a ditch. (I neglected to say before, you can go up hill in running your ditch, as well as down, by simply reversing the ends of your frame.) If you can get an outlet by running your ditches with a branch or bottom, it is preferable, as the best land will thereby be saved. But if this cannot be done, as very frequently happens, you will have to use the branch or bottom for an outlet. There must always be a ditch near the top of the hill. If this cannot be done in any other way, the grade must be changed or reversed so as to make the ditches enter into each other until a suitable outlet is secured. In this case, there must be a log eight or ten feet long placed upon the lower side of the ditch you run into, at the point of junction, to prevent the water from breaking over.—The ditch should also be wider from that point down.

When you have an outlet in opposite directions for a ditch that is as much as two hundred yards long, you should reverse the grade about midway, so that the water will run in different directions.

It is best to have no ditch exceeding three hundred yards long running in the same direction. You can most always divide the ditch between two outlets where the distance is so great as that.

The distance the ditches should be apart is owing altogether to the land—its quality, and the grade of the hill. I have some of my ditches as close as thirty feet to each other. The usual distance is about twenty to forty yards on hilly land—red stiff land will bear even more than that. The only general rule that can be laid down on this point, however, is, *be sure to have them close enough together to prevent washing.* When you have finished staking a ditch with the small sticks, as above directed, you should then go back and alter them where the crook is too abrupt, and then remedy it by cutting the ditch deeper or more shallow at that point. You will find many places can be done in this manner on account of the general unevenness of the surface.

When this is done, have a furrow run

with a plow six or eight inches from the stakes on either side. The furrow is run a little distance from the stakes, so as to prevent the horse from stepping on them. Another furrow is then run upon the other side of them—making the space between about fifteen inches at the upper end, about three feet at the lower end, (the ditch three hundred yards long.) Now plow out the middle and have the dirt pulled out with hoes on the lower side, until the ditch is six or eight inches deep. It will be necessary to plow it out two or three times, first with a scooter and then with a shovel, so as to make it concave when finished, or you can use any kind of plows you wish. After this is done, by stooping down low in the ditch you can see the rough points or lumps that will need trimming. I think ditches should be as shallow as possible to answer the purpose for which they are designed, so that horses and mules will step across them more readily and the dirt will not be so apt to fall in from the edges. The ditch should be wide for the reason, the water being spread over a greater surface is less liable to wash it into a gully than if confined in a narrow space.—Even when a ditch is well laid off, if it is made too narrow it may fail altogether. If at any time you discover that a ditch is too narrow, alter immediately—; if too wide, (though this is rarely the case) let the grass grow into it on the upper side, and in one year it will get narrow enough.

At all gullies and washes across which you wish to carry your ditch, put a log upon the upper as well as the lower side of the ditch, as long as the wash is wide. The size of the log to be in proportion to the depth of the gully. The ends of the log on the upper side must be placed in the earth even with the surface. If logs are placed carefully in this manner in several places between the ditches, the gully will soon fill up. Pine brush, if convenient, may also be used to advantage for this purpose.

Stubble land is much the easiest ditched—because the surface of the earth is more smooth, and if done in summer, immediately after the grain is cut so that grass will grow on the embankment, it is not so liable to wash.

The largest gullies may be stopped in this manner: First, run off your ditch without any regard to the gully, and at the place where it crosses dig out two

places on each side of the bank of the gully, opposite each other, above and below where the ditch is to cross, and as deep as the gully. Cut logs long enough to reach across the gully, and fit them in the places dug out in the sides—then put them in at each place one upon top of the other until they are as high as the bank of the ditch should be to prevent its running into the gully—then fill up the space between as high as the bottom of the ditch, with dirt, carefully stopping the cracks between the logs with straw. Put in a single set of logs every twenty or thirty feet across the gully between ditches, in the same manner, then fill up with logs, brush, or any thing that is convenient, and the work is done.

I have filled up and am now cultivating across gullies in this manner—one in particular that was from five to seven feet wide, and equally deep, about one hundred yards long.

Lay off the rows for cultivation on a level. Plant corn, as well as cotton, in drills. Lay off guide rows about thirty to fifty feet apart on ordinary hill-sides; but as they will not run parallel upon a level, some places will be much wider than others. In the middle of these wide places run another row upon a level, then commence laying off your rows for planting parallel with the first rows, above and below alternately, until they meet in the narrow places—then run upon each side of the guide row in the middle until you have finished.—The very short rows (they will sometimes occur) may be laid off by guess.

To preserve these guide rows when grain is sown, I make the best hand that laid off, go ahead and run them over.—This he can do, very nearly, by counting the rows at the narrow and wide points. Then take a turning plow and run a furrow upon each side of it, making a ridge. This will enable you to identify it the next year.

Every time in plowing over a field, I make some of the plow hands clean the loose dirt out of the ditches, at "twelve o'clock," while the horses are eating. I know there is great diversity of opinion as to how land should be cultivated after it is ditched. Many reasons are given for plans differing from that here laid down.

Some contend that the rows should be laid off so that each one will carry off its own surplus water. Now, if each

row is to carry off its own surplus water why have ditches at all? My argument for having the rows upon a level is, when there is too great an accumulation of water to be retained in the middle of the rows, let it come over all the way in one smooth sheet, and before it collects in a body sufficient to wash, run into a ditch.

The great error in all that I have seen written on this subject is, that there was no difference made for the fall of straight or crooked, long or short, very steep or gentle hill-side ditches.

I will here close this subject, that might fill a volume, and still be productive of no good—still fail to convince others, as others have failed to convince me. I have tried many plans, adopting in the outset the motto, "try all, and hold fast that which is good."

If I have made myself understood in the foregoing pages, I am satisfied; and in conclusion, in behalf of the plan here recommended, will only claim of others a *fair trial*.

Manures.—No. 8.

Their Uses, History, Modes of Preparation, Comparative Value, Rationale of their Causes of Action, Etc. Etc.

BY PROF. J. J. MAPES.

In our last number we referred to the use of muck in composts, &c., and for a more minute account of its advantages, we refer our readers to an article in the present number, headed "Essex County Institute," as the facts elicited on the use of peat, at the Conversational Meeting of that institution, are perhaps more full than can be anywhere found in so condensed a space. Farmers living near the sea-shore, who can collect the seaweed when it cannot be immediately spread upon and plowed into the land, would do well to mix it in the peat compost, as its decay there will be mutually beneficial to itself and the peat. The small quantity of salt contained in seaweed, is just sufficient to incite the mass to rapid decomposition, while the resulting ammonia liberated will be readily absorbed by the peat.

Farm-yard dung is usually taken as the standard for judging of the comparative qualities of general manures. Thus Professor Johnson tells us, that he found that on a light gravelly soil, the soil simple produced 120 bushels of potatoes to the acre; that manured with 20 tons of stable dung, a similar quantity of land gave 219 bushels; and with 20 bush-

els of salt, only 192½ bushels: and Mr. George Johnson found that 20 tons per acre of stable dung, gave 23 tons of carrots; 20 bushels of salt applied to a similar space, produced 18 tons: Our readers, while giving the preference in these experiments to stable manure over common salt, must not forget that 20 tons of stable manure, at or near New York, with the average expenses of cartage, and expense of spreading on the land, would cost not less than five dollars per ton, supposing each ton to be equal to two double horseloads, the cost of which at stable price is one dollar each, cartage one dollar; and spreading, extra cartage, &c., fifty cents per load; being as before stated equal to five dollars per ton, or one hundred dollars per acre—whereas, twenty bushels of refuse salt may be had at the packing yards at a cost of twelve and a half cents per bushel, which, with the cartage, spreading, &c., would not exceed five dollars, being a saving in cost of manure, of ninety-five dollars per acre. Thus it may be doubted if ten tons of farm yard manure, with twenty bushels of salt, might not have produced an equal result with less cost.

The following table of comparative values of manures, used simply, may prove interesting: they are the results of experiments made by the Rev. E. Cartwright, upon potatoes.

The soil simple produced 175 bushels per acre.

363 bush. of fresh dung yielded	192 bush.
30 " soot	192 "
60 " wood ashes	187 "
60 " malt dust	184 "
363 " decayed leaves	175 "
363 " peat	159 "
363 " saw dust	155 "

A similar ratio of results to the above would not be obtained on the clay, red shale or hard pan subsoil of New Jersey, and the sandy loams of Long Island; in either of these soils a cheap compost made of one-third the fresh dung stated above, composted with one half the peat, and six bushels of salt, would equal the results which could be possibly obtained from either the above named receipts, when applied to potatoes; or one cwt. of Peruvian guano composted with five tons of peat previously decomposed by the salt and lime mixture, and used for an acre of potatoes, would be fully equal to that which would result from three and a half cwt. of guano not so composted. Indeed, decomposed peat alone has a most favorable action on the potato

crop. We proceed however to give the English experiments, and being endorsed by Johnson, they are worthy of the fullest credit.

“In some experiments in 1842, by Mr. Clowes, of Hemsley, in Norfolk, the soil—a mixed free working loam, resting on brick earth and clay—three pounds (\$15) worth of each of the following manures, were applied June 23d, the produce of bulbs and tops per acre is stated.”—*Jour. Roy. Agl. Soc* vol. 4. p285.

	TONS.	CWTS.
Soil simple.....	5	13
12 tons fresh horse dung.....	12	7
15 tons bullock-yard dung.....	9	12
50 bushels of spratts.....	9	11
15 tons fish and earth.....	9	3
20 bushels of bones.....	10	3
3½ cwt. of guano.....	12	2
10 cwt. of rape cake.....	8	18
20 bushels salt malt screenings	9	0

The experienced farmer cannot but observe from the above, that those substances (horse dung and guano), which give the largest amount of ammonia; and our own experience has been, that those substances which from their carbonaceous character are capable of most readily receiving ammonia from the atmosphere and retaining it until required as a stimulant, at the time the potato vines are setting, produces the best results. Thus Peruvian guano composted with charcoal dust or well decomposed muck, with a small quantity of common salt added to make the mixture more retentive of moisture, always produces superior crops, and less liable to suffer from drought than with most other manures. In many parts of our country the potato crop is materially injured by grubs, none of which will be found in the land manured with six bushels of salt per acre.

“Some valuable experiments on farm yard dung, compared in various proportions with other manures, applied to potatoes and oats, were made by Arthur Young, of which the following is the result:—

“In the last week in March, 1787,” he says, “the white champion potato was planted in beds, each containing a square perch of good sandy loam, on a wet clay marl bottom, the sets being planted one foot apart.

	Quantity per acre of manure.	Produce in bushels per acre.
Soil simple.....		180
Farm-yard dung.....	16 cubic yds.	240
“.....	21 “	200
“.....	32 “	280

“.....	32 “	400
“.....	42 “	360
“.....	52 “	409
Soot.....	160 bushels	360
Wood ashes.....	160 “	240

“At the same time, on the same ground, twelve square perches were planted with the same potatoes, and manured as described in the following table, which also gives the respective products:

	Produce in bushels	Per acre	per acre.
Soil simple.....			280
Dung.....	32 cubic yds.		400
Wood ashes.....	40 bushels		400
Slaked lime.....	160 “		380
Rot'n straw with some little animal manure,	32 cubic yds.		409
Urine and soap water in equal moities	1440 gallons		240
Barley straw.....	1½ tons		300
Potash.....	340 bushels		380
Dung.....	32 cubic yds		400
Salt.....	160 pounds,		480
Dung.....	32 cubic yds		480
Lime.....	160 bushels,		520
Dung.....	32 cubic yds		520
Urine.....	432 gallons,		

“The great product,” adds Young, which attends the addition of urine to dung, affords a very important lesson; which is, to manage dung hills in such a manner as to save, if possible, every drop; this is a point too much neglected, and, indeed, by most farmers very little attended to.”—*Annals of Agriculture*, vol. ix, p. 652.

Notwithstanding that Young wrote more than seventy years ago, and that all close observers from that time to the present, have noted the fact that the urine of animals was more effective as manure than their solid excrement, still but very few farmers have profited by the advice. Any substance containing carbonaceous or vegetable matter, and many others, have both the power to absorb urine, and to retain its resultant gases, and still we find open cattle yards without even a pit filled with such absorbants to receive the urine. It is also well established that the urine of animals will decompose twelve times as much peat while it retains the animal warmth, as afterwards, and still animals are not bedded with it: and worse than all, we occasionally see cattle yards with gutters cut to some lower point to lead off the rains, and with them all the soluble manure of the yard: let those of our readers who are eternally preaching in favor of good old fashions, as compared with more modern improvements, recollect that Arthur Young was a good farmer before they were born, and still he saved the flu-

ids of his cattle yard. In support of this doctrine, we call attention to the last item in the foregoing table; 430 gallons is less than a half cord measurement, and still we see its comparative value, and consequently comparative results are much greater than several half cords of the solid excrement, and indeed, as before stated, the ratio of results is greater than the ratio of production. We should have been glad to have finished barn-yard manures in this article, but the press of other matter prevents us; we will do so, however in our next number, and give a number of tables which may prove useful in the distribution of manures.

[Working Farmer.

From the Indiana Farmer.
Scientific Agriculture.

BY PROFESSOR B. LAWRENCE.

Inorganic Elements.—Perhaps it would not be amiss for me to repeat an idea which I have heretofore stated, and more than once alluded to, in order to prevent any mistake or confusion on the subject. It is this: that all vegetables are made up of two classes of substances, or elements, one of which is called organic, and the other inorganic. The former exists in much the greatest quantity in all plants; varying in different species, from eighty-nine to ninety-nine per cent. of the whole when thoroughly dried.—(All plants, while in their growing state, contain an abundance of water, but this is not included, when speaking of their constituent element.) The latter, though existing in so small a quantity, (from one to twelve per cent,) are yet indispensably necessary, and no plant can come to maturity without them. No one species of plants ever contain all the inorganic elements which are found in the vegetable kingdom at large, but every species requires two or more elements; and it is not a matter of indifference which these shall be. Every plant has its choice, and it will have these or none; and it will have just as many as it wants, and no more.

There is a partial exception to this remark, which I will mention. I is this: Plants which require much potash, if they cannot obtain all they want, will accept soda to make up the deficiency; and those requiring lime, if lime is deficient, will make up the deficiency in magnesia. But they will soon degenerate when reduced to such necessities. The reason why it will accept of these sub-

stances at all, is, because these earths so strongly resemble in their chemical properties, those for which they are substituted.

When vegetable substances, as wood, straw, leaves &c., are burned the organic part entirely disappears, being converted by the heat into invisible gases and vapor, and mingles with the atmosphere. But the inorganic part being combustible, remains in the form of ashes. These ashes consist of the several mineral ingredients, which the plant or plants producing them, during the process of their growth obtained from the soil; of course the soil is that much poorer in fertilizing elements, than it was before these plants grew upon it. But if these ashes are restored to it, then it is in the same condition it was before. It has received again that which it had lost.

When vegetable matter decays in a natural way, the same process goes on as when it is burned; the organic part is slowly converted into gases which mingle with the atmosphere, [Stick a pin here anti-woods burners—*PAR.*] while the mineral part returns again to the soil. The only difference being the length of time required to complete the process.

Every particle of inorganic or mineral matter contained in plants, is derived from the soil. It is taken up by the rootlets of plants in a state of solution in water, and conveyed into their circulation. Of course no part of a soil can contribute to the growth of vegetation but that which is in a soluble condition, which is always a very small percentage of the whole. The mineral portion of all soils consist of little else than those very substances which we call the inorganic elements of plants; and yet plants are often sickly and half famished for the want of these very substances which we call the inorganic substances in which their roots are immersed, like Tantalus, who was ready to die of thirst, while standing up to his chin in water. Much of the secret of successful farming, therefore, consists in rendering soluble a sufficient quantity of the mineral ingredients of the soil, to answer amply the demands of the growing crops. Every mineral substance can be rendered soluble by chemical agents, thus silex or flint, which ordinarily is one of the most insoluble things in nature, by the aid of certain acids and alkalies, can be rendered soluble in water, and thus be taken up by the rootlets of plants.

Limestone is insoluble in pure water,

but water charged with carbonic acid, becomes a solvent. It often happens then that one of the uses of vegetable manure is to furnish carbonic acid to the water which percolates through the soil, that they may take up the necessary quantity of lime for the use of plants.

Reader, did you ever think to inquire into the reason so small a portion of the ingredients of any soil is ever in a soluble state at any one time? If not, I will tell you. It is to preserve them from unnecessary waste. If the whole were in a soluble state at the same time, the rains in a single year, might carry the whole away, and thus they would be lost forever. In the natural state, when the vegetable productions of the land are left to decay upon its surface, this decay furnishes a plenty of acids and alkalies, to render soluble an ample amount of the elements of the soil for the future crop. Thus the fertility of lands in their natural state never diminishes. But is is far different with cultivated lands; their annual crops being carried off, stops the process of supplying in a natural way, and hence the necessity of furnishing this supply in an artificial way.

For the Farmer and Planter.

The December Number.

Messrs. Editors:—We are glad to see the December number out, and promising not to be the last—that's right—as Barnaby Rudge's raven said, "never say die." Remember the old adage, "the darkest time of night is just before day," and let us hope that a day will soon break on old Carolina, when her agricultural population will have nerve enough to sustain, and brains enough to enjoy half a dozen papers devoted to the development of her resources. We have not time to notice the contents of the last number, but there are two or three articles we must say a word or two about. That report on grass, from the pen of Col. Sumner, contains much food for our digestion. Hay can be grown here easily and profitably if we will only take a little pains. We mowed, in August, three large wagon loads of crab-grass hay, from about an acre of ground, from which we cut in June a pretty fair yield of barley. It was thin land, which had been cowpened several years ago, and cropped as follows—turneps, potatoes, barley, potatoes, barley, hay. There is now a fine crop of white clover (volunteer) upon the lot.—The lot has never been pastured, save by hogs after potato digging for a few days. Timothy, red-top, and musquite, all do

well on moist soils—the native rice grass, which grows where nothing else will, makes a very good hay when properly cured; and, in fact, there is the difficulty after all—during the mowing season we are all so crazy about killing grass, that we can take time to do nothing well.

"Dogs!"—Talking about dogs, what do you say to a tax on dogs—"mongrel, puppy, whelp and hound, and cur of low degree"—the proceeds to be appropriated to the establishment of an Agricultural Bureau, with a No. 1 Chemist attached, to analyze all soils, minerals and "sich like," *pro bono publico*?

"SMUT IN WHEAT."—"Taking the bull by the horns," eh? Mr. Blount don't seem so ready to do it after all—but he must recollect that there are two horns to a dilemma, and he may be forced to take one—or take to his heels. We will state a few facts and should be glad to hear what the anti-sporule, practical gentlemen can say to them. A field of wheat soaked in a strong solution of blue-stone,—all save two or three "lands," the soaked wheat giving out, these were sowed with wheat out of the same box—there was not a smut head visible in any part of the field save in the lands not soaked, wherein they were abundant. No. 2:—Last year we sold twelve bushels wheat, at \$1.50 per bushel, to a neighbor, who don't believe in soaking because its "book farming notions" (he remarked to us that he had sold his own wheat to buy seed from us, because our wheat never had smut), after sowing eight bushels, the \$1.50 per bushel began to hurt, and he concluded to buy from another neighbor, who had formerly bought our wheat but did not believe in soaking either, four bushels at \$1.25—neither were soaked, but the eight bushels bought from us had no smut, while the other was completely ruined—all in the same field, mind. We have sown wheat for eight years on our farm, and have never had smut to trouble us, while we know that one of our neighbors, with but a fence between us, has suffered severely more than once. Now if smut be an insect, we are at a loss to conceive why the "venomous" rascal should be so fastidious in his taste—we think our wheat as sweet as other folk's, and can see no reason why he should pass us by. Mr. B. has seen grains smutted but not punctured by the insect, aha! Stick a pin there, Messrs. Editors. It is the province of one class of insects to prey upon another—now here is a smutted head without a puncture—an

insect punctures it, and in a few days a worm comes out, which, after a while, turns to a black bug that is invariably found on all smutted heads about or after harvest. From July to July, where does this little gentleman in black keep himself. Now here is the smut—here is the worm, and here is the bug. Mr. B. is doubtless perfectly right in all this—but he must pardon us for believing that the little gentleman in black may be fastidious enough to prefer a smut grain to a sound one, and that he will not be found in a field where there is no smut. He has given us no proof that the insect made the smut-head—but he has proven that it punctured a smut head, laid an egg, &c. Are not insects more apt to attack feeble and diseased than healthy plants?

Mr. B's. remarks on wheat straw are sound and sensible—it is a capital food. His views on the patronage of home papers nobly spoken. BROOMSEDGE.

Big Branch, Jan., 1853.

Smut in Wheat, and the Cause of It. NUMBER II.

Continued from Thirteenth Page.

During the summer of 1831, I again found that my wheat was smutty, and repeated my experiments upon the same species of bug, (mentioned in my first number,) of which I found great numbers on the smut ears. As in the preceding year, I put as many of the smut ears, with the bugs on them, in my bottle as it would conveniently hold: as before, the bugs all died in the course of three or four weeks. I then carefully examined many of the smut grains, in nearly all of which I found a small maggot or worm. Some were about an eighth of an inch in length, and in diameter nearly as large as the parent bugs; others were smaller, and several so small, as to be scarcely visible to the naked eye. In some of the grains I could not discover any maggots, I presume because they were too minute to be visible to the naked eye, and I had no lens with which to examine them. The remaining smut grains were left untouched in the ears, put into the hottle again, and in two weeks I again had another full crop of bugs hatched out. These last, with the smut ears in which they were bred, I now have in my possession. A few days after I had found the bugs in my bottle were hatched out, I observed immense numbers of the "smut bug" (as I shall hereafter call them) almost literally covering the floor and timber of the barn where my wheat was housed. There

must have been millions of them. No doubt they had been bred in the smut ears carried in with the wheat. Within three or four weeks they all disappeared. Those which I saw in the fields were extremely shy, and upon the slightest touch of the ear fell to the ground, where they laid perfectly still and inanimate, feigning, as it would seem, to be dead. Being so small, and in color approaching to that of the soil, (a gravelly clay,) it was very difficult to find them. After remaining quiet, however, for a few minutes, they ran up the stem of the smut wheat and resumed their feeding on the smut. They were quite active in running; but whether they ever did, or could fly, or not, I could not ascertain. Their habits appear to be similar to those of the pea bug; and on a close examination, I have found several smut heads, in which all the grains had evidently been perforated near the lower part in the same manner that pea pods are found to have been perforated by the pea bugs. The punctures were so minute as to be scarcely perceptible to the naked eye; but I do not doubt that with a good glass all the smut grains would have been found to have been perforated in the same manner.

Upon much reflection I have come to the conclusion, that smut wheat is the natural food of the bugs I have described. There may be, and very probably are, other vegetable substances upon which they sometimes subsist when their natural aliment is not to be obtained. But as conjectures without facts upon which to found them are oftentimes worse than useless, I shall refrain from suggesting any at present, although (if convenient) I may hazard some in a future number.

That the smut is not produced by a disease in the plant, is, I think, conclusively proved by the facts I have stated. But if additional proofs were wanting, I have them, sufficiently strong as I should imagine to convince the most sceptical, in some circumstances which took place on my farm during the past year. I had the previous year, taken much pains to procure seed wheat, to sow in one of my fields, which was perfectly free from smut. The land had been in clover about three years. It was plowed three times, and was in excellent order. The wheat was sown in good season, and in the fall looked very well. It continued to grow finely until it eared out when I discovered it to be more smutty than any other which I had on my farm, although

there were two fields which had borne a smutty crop the previous year, that had been again sown. I was at a loss how to account for this, until I recollected that the clean field which I had sown with clean wheat, had been well manured a few weeks before the wheat was sown. The manure was taken from the barn yard where all the straw and chaff of the smutty crop of the previous year had been thrown when it was threshed out. The smut grains of the former crop were undoubtedly carried into the field with the manure. In these smut grains, I presume, the maggots of the smut bug existed in great numbers, and thence came the insects, which smutted the wheat to so great a degree as to amount, probably, to one-tenth part of the whole crop in the field.—*The Genesee Farmer.*

J. H. H.

[TO BE CONTINUED.]

Wearing Suspenders.

It is the prevailing fashion, especially in cities, for men to dispense with suspenders, and support their pantaloons by having them made to button tightly around the person, above the hips.

It is our settled conviction, that this practice is decidedly detrimental to health. Much has been justly said against tight lacing, as applied to females; and of suspending heavy skirts to the hips, by fastening them tightly around the waist or loins, where there are no ribs or other bony frame-work to resist the compressive power. The changes have been rung upon the heat caused by this close bandaging of the abdomen, the evils of thus cramping that part of the vital apparatus—the digestive system—which nature intends to be free and unrestricted as to room and action, and would that these tones could have been heeded in time to prevent the frequent death-knell which such practices have rendered necessary; but who ever thought of sounding the alarm to men against a similar practice in respect to their own dress?

We admit that half a dozen skirts weighing many pounds, are worse to the constitution of the wearer than the drawers and pantaloons as worn by men, but worse only because the quantity is greater, and the pressure necessary to sustain them is more. The principle is the same. Females should support their skirts mainly by the shoulders.

The hips of boys and men are constitutionally narrower than those of the female; and therefore, the clothing thus

worn requires to be tighter to prevent slipping down.

As we walk the streets of our city, we see scores of boys, from twelve to sixteen years old, with their pants buckled very tightly around their diminutive hips, preventing growth at this rapidly growing age and the result is, a generation of slim-shanked, narrow-hipped, gaunt-waisted, dyspeptic, pale-faced, puny apologies for men.

It is evident to every reflecting mind, that the process of digestion cannot be properly performed, when the region of the stomach and intestines is cramped by tight dressing. This soft compressible part of the body should be left as nature has left it—unrestrained, untrammelled.

Tie up the bowels of a horse, and how long could he work; to say nothing of covering him with barrel staves instead of whale-bone, and lacing him up with a cart rope from shoulders to hips.—What respectable horse would not balk at the manifest infringement of his liberty and the laws of his nature; and is man an exception to physical law?

But, says the ladies, "Our dresses do not feel tight." Neither would a ring placed on a child's finger, and allowed to remain there until the child was full grown: but there would be a groove in that finger, and in the very bone within it, so that there would be room between the ring and the bone, for the flesh and for the circulation of the blood.

We become accustomed to tight dressing, and the soft parts of the body will not grow against hard pressure, therefore the dress may not feel tight.

A melon or pumpkin will grow between two rocks and not mar its rind.—It approaches so as to touch the stones and then extends each way in growth to its full size, but it is flattened in the middle, and half cut in two like an hour glass, yet its confinement thus does not "feel tight."

But, say boys and men; "We suffer no inconvenience from wearing our pants tight around our hips." To this I reply as above. They say, too, that "they feel more free in action without than with suspenders." So they may around the shoulders, but let the pantaloons be loose enough to move as the person bends, and let the suspenders be made elastic, and no special want of freedom will be experienced.

Around the waist and hips, the very place where freedom of action and ex-

pansion should, of all other parts of the trunk, be enjoyed, there is tightness, compression, and a destructive lack of freedom. If it be not felt as a serious physical inconvenience, it is because custom, like taste of tobacco to the user, has made it a second nature. Its functional effects on growth, digestion and health, however, are not the less real.

We plant ourselves on this point, and claim that our position cannot be disturbed, viz: the animal economy, from head to foot, should never be dressed in such a manner as in the least degree to cramp the freedom of any action of the body or limbs. Let this be the rule with all, and one-half of our doctors might be spared to cultivate the soil.—*N. Y. Phrenological Journal.*

From the Unionville Journal.
Fruit Trees.

One of the items of news by the last steamer reads thus: "Two thousand barrels of American apples were sold in England at (\$17) seventeen dollars per barrel, and (2500) two thousand five hundred barrels more ordered." Now just figure that up brother farmers: deducting one dollar and twenty cents for freight, per barrel. Bear in mind at the same time that the crop of apples this season was a very heavy one, and the number of trees have increased a hundred fold in the last few years. I think that will do—what say you? will it pay?

A friend said to me last summer "I should thank you very much for some suckers from your Sweetning Apple trees—if you have any such." I told him I had several, but that I intended to change their tops by grafting, as soon as possible, for I had found that my children commenced eating them almost as soon as the blossoms were off. "Well," he replied, "there is something in that, to be sure, but still, it is the most valuable apple you can propagate for stock." This he had learned from a friend, from Ohio, who had recently paid him a visit. The gentleman had informed him that, in his country, extensive orchards of the varieties of this kind of apple were planted, for the purpose of fattening stock; and that experience had established the fact beyond controversy, that it was by far the most economical plan that could be adopted. And this too, be it remembered, in a country where corn is produced at the rate of from fifty to a hundred bushels to the acre; and brings in market, on an average, not twenty-five cents a bushel.

This was news to me, and staggered me not a little. But it had the effect of making me look into the matter, and I found upon examination and inquiry that the facts were abundantly sustained. Much to the joy of the children, the old Sweetnings were let alone, colick to the contrary notwithstanding.

But for all that, and grateful as I felt for the valuable information he had imparted, I was loth to promise *those suckers*; and why? For various reasons, and among others suckers are almost certain to carry with them any disease with which the old trees may be effected; and they are nearly all more or less diseased. They are also certain to produce an abundant crop of suckers every year as long as they endure, thus entailing an endless task upon the cultivator; they have no tap root to support them against storms, and finally in nine cases out of ten, when you plant out one of them you are uncertain as to what kind of fruit it will bear, for the fact is pretty well established, although the practice of their descendants might seem to discredit it, that our forefathers did once in a while graft a good variety on a seedling stock, and of course where this has been done, an offshoot from the root will bear a different fruit from the top—I have known persons badly disappointed in this way. I do not deny, however, that I have seen many fine and vigorous trees produced in this manner. In fact, there is scarcely any other sort in this country. Old Sam Harlan being the only man I ever heard of raising apple trees from the seed in Union district, and his orchard abundantly testifies to this day, old as it is—the great advantages to be derived from adapting that plan. Many persons I find are of the opinion that it is a life time affair to get trees old enough to bear from the seed; but this proceeds from our utter want of experience on the subject.—An ounce of fact is worth a pound of theory, is an old saying, worthy of all acceptance, as I presume no one will have the hardihood to deny. Well, I have given one fact already, and will now add my experience, which, although but limited, will, I trust, make up the required weight. Six years ago last spring, having come to the conclusion to get married, I took it into my head that it would be right and proper that I should provide something pleasant for the little fellows (should I be so lucky), to nibble at. So according to universal custom, I went out among the old trees on my place, mattock

in hand, and dug quite a number of the most promising suckers; these I removed to my nursery with the intention of grafting them the following spring. About the same time a friend gave me some fine winter apples, and I determined by way of experiment to plant the seed and see what they would do, for I had then never heard whether they would vegetate or not. They did, however, come up in the spring, something to my surprise, but looked at first feeble and unpromising enough. I let them stand, however, as I had planted them. The result was, that they grew three feet to the others one, and by the end of the first season were six feet high. The spring following I grafted both kinds; two years after they were all transplanted to my orchard, and some of both kinds bore fruit the past season. So that I had fruit from them in less than two years from the time of planting the seed. The superiority of the seedling stocks is now manifest to the most casual observer. Having heads more regular and better balanced, they are better adapted to answer the purposes for which nature intended them. They are more vigorous from the fact that they have more lateral roots, and in addition a fine tap-root, which not only supports them against storms, but by penetrating the subsoil derives nourishment from it, which is too often wanting in the upper stratum. Should any one, however, be so great an infidel as to have doubts, after all I have said on the subject, just let him come out—I do not live a hundred miles from town—and see for himself. If what he can discover above ground does not satisfy him, then I promise to go so far as to take up a tree and show him the roots—provided (as Judge G. said about the Rattlesnake), it be a little one. I have dwelt thus long upon this branch of the subject, because now is the proper time to plant the seed. Those from late apples I have found best, and the wagoners from the thrifty old North State, will probably furnish a good supply. The seed should be sown soon after being taken from the fruit, in drills two or three feet apart, and covered lightly. Put them in rich ground, and I will insure trees of from four to six feet high by next Fall, and they will bear fruit by the time the baby gets old enough to carry it in his bucket to the school house.

SEEDLING.

Never play till your work is finished, and never spend money till it is earned.

The North and the South.

The Baltimore American, in reply to the sneers of some Northern journals at movements to advance Southern commercial interests, says:

What is the North to do without that assailed, vituperated, agitated, convulsed South? Nay—what can it do without it? What is the basis of its commerce?—What is the basis of its industry? What is the basis of its exchange? What is the basis of its manufactures? What feeds the looms of England and France? What builds and freights its ships?—Hard as it may be for that region to acknowledge the fact, the only reply is: The South and its Labor!

In 1850, the labor of the South gave those elements, without which American commerce at the North could not exist a moment, in the following enormous quantities:

Rice, 215,312,710 pounds.
Tobacco, 199,752,616 pounds.
Cotton, 2,270,000 bales.
Cane Sugar, 247,851,000 pounds.
Maple “ 31,369,886 pounds.
Molasses, 12,708,606 gallons.

All this vast production of national staples—the substantial basis of Northern manufactures and commerce,—is the result of Southern labor, independently of immense quantities of provisions, hemp, flax, catile, and various other articles grown in Middle and Western States, where “the institution” is maintained. Blot them out by a blow—and where is the North as well as the South? And shall not that South be justified heartily by all its parts, if, consistently with all its own interests, it can consolidate the trade of supply and production within that geographical boundary which abolitionism or its kindred tricks cannot penetrate? The South must feel that as long as an agitator lives at the North wicked enough to entertain his unconstitutional heresies, and powerful enough to find a press or a politician to herald them—there is no security for its property. It is admitted that this property and its labor are the foundation of national wealth. They are, moreover, not only the basis of national wealth but among the strongest elements of national power. The emblem of the world's peace is no longer the Olive branch, but the Cotton Plant.”

Be sure to have cut and hauled into your yard a full supply of fire-wood to last you till this time next year.

Fruit and Orchards.

Although the important subject of fruit culture is now receiving greater attention than at any former period, still it does not receive that general attention which it merits. True, many are devoting all their time and energy to the raising of fruit, and realize large profits from their orchards; but every farm should be well supplied with the various kinds of fruit trees, and each farmer have the pleasure of eating the fruit of his own cultivating.

In setting out an orchard, select a spot of ground, say two acres (it makes no difference on what part of the farm, provided it suits the convenience of the farmer,) that is under good cultivation; make the ground mellow, by plowing, subsoiling and harrowing; then furrow it out, each way, with the plow, making the furrows thirty or thirty-four feet apart. After the ground is prepared in this way, dig the holes (of course where the furrows cross) large, say six feet in diameter, and eighteen inches deep, so that in setting the trees, the roots can be placed in their natural position.

In transplanting it is necessary to have many persons, one to hold the tree in its proper place, while the others place the soil around it; this soil should be from the compost heap, or that taken from the hole may be used, if thoroughly mixed with well rotted manure. The trees should be set about as deep as it stood in the nursery.

In selecting fruit trees, especially the apple, care should be taken to procure the varieties that produce best in the section where they are to be transplanted, for while some kinds yield well in one region, they are nearly worthless in another. The trees should be two or three years old, from the bud or graft, when set in the orchard. The usual time for transplanting is in the spring or fall; the former we recommend, yet some prefer the latter.

It is a well-known fact that the apple tree does not arrive at perfection in one or two seasons, but that it requires years to attain its growth; therefore, after the orchard has been set out with labor and pains, the farmer must not think his labor finished, and that the trees will hereafter take care of themselves, and in due time produce a bountiful harvest; but year after year he must not only stir the ground, and keep it loose, but also feed it well with manure. Besides, there are also those vile creatures, the caterpillar and borer, who not only inhabit, but are

ever endeavoring to destroy the orchard; they must be routed from their pleasant abodes and slain without mercy.

When necessary, the trees should be carefully and judiciously pruned with the saw and not with the axe. Fruit intended for market, or winter use, should always be gathered without bruising, as this is essential to its preservation.

[*Dollar Newspaper.*

From the Unionville Journal.

Wheat Again.

MR. EDITOR—Before our Scooter gets rusty, we may as well run it into the ground again.

After-culture. You have your wheat now "put in" to your notion, the water furrows all well opened, and so inclined as to carry off the surplus water into your drains. Never allow an animal to trespass upon it when the soil is wet enough to allow the hoof to sink into it deep enough to make a hole. Light sandy, porous soils are sometimes benefitted by pasturing, and if the season be favorable, the wheat on few soils will be injured by the grazing of small animals, (colts, sheep and calves,) provided you do not overstock the land. In this very matter farmers, generally, commit a great blunder. Just enough stock should be kept on a field to keep it neatly clipped, but not eaten to the crown. There is reason in all things, and common sense should teach any one that no plant can thrive when robbed of the leaves which are as necessary to its support as man's lungs are to his existence. Much depends, however, upon the variety of wheat. The Orleans tillers very little and if sown early, or even late, upon rich land, it will often shoot up and grow off so rapidly in the spring as to be in danger from spring frosts. The Mediterranean stands pasturing very well, better, we believe, than any variety we know—but being a wheat of rather slow growth, it should be sown early in October, at least.

The harvest—this is a critical period—a little wet weather may blast your hopes, while the longer it is delayed the greater the danger of rust. Hence it is our custom always to commence cutting when the grain is in the dough state.—There is no greater risk of its spoiling—it will yield more flour to the pound, (less bran though, and the straw is better food. Pick out a section of the best wheat in your field, on such soil as you expect to sow next year, walk through

it, pick out all heads of stray wheat, cheat and cockle, and when it is dead ripe cut it and store it by itself to be first threshed out for your seed.

It is a common practice in the country to let wheat stand too long in the field—"The cotton is grassy, every thing is behind hand and he can't take time to haul it in just now." This is miserable policy—your wheat is made, why not make sure of it—you may work away at your cotton—but an August storm or an October frost is still before you. Remember "there's many a slip between the cup and the lip," and haul in at once. The sooner you can thresh it out the better, for, by early threshing and early sunning, you secure many a full grain in lieu of an empty one, and put an end to many a little white moth that would come forth to trouble you hereafter. Thresh out your wheat in dry weather, and take care of the straw—house it or stack it—now and then, sprinkling a little salt amongst it.

We have been laughed at no little by practical people who don't believe in "book farming" about our notion that wheat straw was good food, but that is a very small matter—to be laughed at when you have the truth on your side. Look at the analysis of straw and its proportion of chaff:

Wheat Straw		Corn Fodder.
Silica	69.36	53.55
Phos. Acid	5.24	19.25
Sulp. Acid	4.45	4.18
Lime	6.96	6.09
Magnesia	1.45	1.25
Potash	11.79	12.76

Now, if there be any truth in figures, 7 lbs. of wheat straw has almost as much nutriment as 1 lb. of wheat—then it is certainly worth feeding. Some people haul out their wheat straw and chaff upon the poor spots of the farm. If they do not think it good food, it would certainly pay better to litter the stables than by the hauling out system.

As soon as ever your wheat is threshed it should be sunned and put away as hot as you can make it in good boxes. The seed wheat should be put away rough, that is, only run through the coarse riddle—it is not so apt to heat or be infested by the weevil. But if you will sprinkle half a bushel of lime to every fifty bushels of wheat I will insure you against weevil, and I had almost said, against rats. The sunning operation is a very troublesome one, and generally, badly done, and Madam must

be a very good natured body if she keeps her temper under the requisition for all the old counterpanes, quilts, &c., that can be spared for the purpose. This may all be obviated by a very simple, cheap and permanent fixture. A drawer or drawers 10x12 feet can be framed out of scantling (2 by 3 inches) and fixed upon rollers, and so constructed as to be drawn from under the machine, or run back, on the approach of a shower, at a moment's warning.

One will hold 25 bushels of wheat, and you will not be under the necessity of waiting till the dew is off, or the ground gets warm, before you put out your wheat. By having a window over the drawer the wheat can be thrown from the box inside out into the drawer, or back again, as required, with very little trouble. This you will certainly find better than the general rush of all the big little and old niggers on the plantation, when a cloud comes up, to put in the wheat.

I trust that I have not made myself tiresome to Scuterum and other friends, who solicited my reappearance, and as the weather seems determined to keep every body from sowing wheat, I may as well lay up my

SCOOTER.

From the Unionville Journal.

The Grape.

Of all the fruits of the earth, the grape has occupied the foremost rank from time immemorial. Its recorded history reaches back to the flood, and that it was known to and cultivated by the antediluvians, is plainly to be inferred from the fact that the patriarch Noah understood its uses. The bible, the only authentic history of those primeval times, abounds with references to its delightful and joy-giving virtues. "The dwelling beneath the shadow of one's own vine," is the favorable emblem of contentment and prosperity; and "wine that maketh glad the heart of man," is numbered amongst the choicest gifts of God to man.

The heathen nations were not behind the chosen people in their love and veneration for its genial delights. To their benighted souls it seemed a something too precious to be a mere product of the earth, but rather a direct emanation from the Deity. According to their custom, it was elevated to a god, and most devoutly worshipped through all succeeding ages. Bacchus, the rosy god of wine, offered a most determined resistance to the innovating doctrines of the

gospel, and was subdued with much difficulty—nor is the conquest yet complete. The pillared fane was laid low indeed, and the ivy-crowned priest was dismissed his functions. The pomp and the pageantry of the festival have vanished, and the delirious shout of the Bacchanal is heard no more; but under a new name, and at new altars, from the gorgeous palace to the filthy hovel, his worship still survives.

The theme is a most alluring one—redolent of pleasures most captivating to the senses—the flowing bowl, and all the joyous associations that cluster around the festive board, and garlanded by the brightest gems that ever flashed in the realm of poesy; from the solemn Psalmist and the soft but sensual Anacreon, to the fervid Byron and the blythe baird Eren. “Here’s a double health to thee, Tom Moore.”

It is not my purpose, however, to write at present of its product, but of the fruit itself, as it comes from the bounteous hand of nature, and before being touched by that of art, which, although an endowment conferred on man by his Maker, for his good, has, in this instance, converted that which was given as a blessing, into his direst curse. In delicious flavor and wholesome influences on the human system, it yields to no other fruit that grows. And to those who have tasted the sweets of the finer cultivated kinds, it would be a mere waste of paper to dwell upon its praise—as idle a task as an attempt “to gild refined gold, or to cast a perfume on the violet.” This class of persons is, however, smaller than it should be, I fear; and as I am not content with the possession of a good thing myself, unless my friends and neighbors enjoy it also, I have been induced to say a few words, in the hope of persuading them to participate with me.

There are several varieties of the grape found growing wild in our forests, that are quite palatable; but they are not more fit to be compared to those I refer to, than is the sour crab to the most luscious pear, or the richest and mellowest apple of our orchards. All were doubtless derived originally from the wild stock, but cultivation has so changed and improved them, that the resemblance can scarcely be recognized except in outward form and appearance.

The varieties in cultivation are very numerous, but it will suffice for the present to mention a few of the best; and in doing so, I shall confine my remarks

to those which experience has shown to be most adapted to our soil and climate.

The Isabella is the earliest and amongst the best table grape with which I am acquainted. The clusters are large and compact—the berries large and oval in form, and of a deep purple color when fully ripe. The flavor is exceedingly rich and musky. It thrives well with us, and is probably a native, as it bears the name of a lady of our State, Mrs. Isabella Gibbes, whose husband first brought it into notice.

The Bland Madina is next in season. Its clusters are not so large as those of the Isabella, and are less regular in form—the berry is large and round—it becomes pleasant to the taste as soon as it begins to change its color, and gradually improves until, assuming a deep purple color, it is of a flavor unsurpassed in its full maturity. It affects the shade more than other varieties, and if exposed to the full influence of the summer sun, will soon wilt and become insipid; but properly protected, it will retain its plumpness and fine flavor for a considerable period. The vine grows most vigorously, and bears early and bountifully. It readily adapts itself to any kind of soil from a warm sandy ridge to a cold damp clay. The fruit, I believe, is proof against the rot and mildew. The honor of its origin is claimed for Virginia, and it was probably introduced amongst us by the earlier immigrants from that state.

The Lenoir ripens a little after the Bland. The clusters are long and very compact. They are well shouldered. The berry is quite small, and nearly black when fully ripe. The flavor is very rich and sprightly, superior to that of any grape I ever tasted. The fruit if undisturbed, will remain on the vine until October, and I have seen it in full perfection up to the time of white frost.—The vine is vigorous and hardy, but requires a warm soil to bear well. There is considerable diversity of opinion as to the history of this grape. Downing ascribes its discovery to Mr. Lenoir, of Santee, whilst the old North State claims it as her own, along with the Catawba Scuppernong, and a host of others. Nor am I surprised at this contention about the honor of its production, it is of such an admirable quality. The following statement I have from a gentleman well acquainted with the circumstances of the case, and it may serve to throw additional light on the matter at issue between high contending parties. Many years

ago, when the late Col. Abram Blanding was a practising lawyer; in passing from Camden to Sumter in attendance on the Circuit Court, he observed a grape vine growing in a waste place that was known as Lenoir’s old field. Upon trial, he thought it worthy of propagation.—Hence the name by which it is now known, and the source from which it sprung. The probability of this account is further sustained by the fact, that Col. Blanding was just the man to observe and appreciate a thing of the sort. His taste for arboriculture is well known to all who knew him; and Columbia has reason to be proud and grateful that she ever ranked amongst her citizens such a lover of nature; for to him is due all the honor of the beautiful oaks and ever-greens which adorn her streets. He richly merits a monument at her hands—but I am aware that such notions are considered old fashioned now-a-days.

One of the chief merits of this fruit is the ease with which it is propagated. A cutting with four or five buds, placed in a damp spot, and properly attended to, will make a bearing vine in three years. Its after-cultivation requires but little attention beyond keeping the ground loose around the roots, and an occasional dressing of manure. It should be moderately pruned every spring, before the sap rises. An arbor or trellice should be provided before the vine runs much—or if these be considered too expensive, a capital substitute may be found in a cedar, cut off near the ground, and its branches somewhat reduced.

LENOIR.

Clover in the South.

From the Southern Cultivator.

Messrs. Editors—Believing the cultivation of Red Clover to be highly important to Southern Agriculture, I propose to give you some of my experience with this invaluable grass.

An opinion has generally prevailed that Red Clover will not succeed well in a hot climate, but I am inclined strongly to believe that if it be supplied with the proper food, it will thrive well as far South as 31 or 30 deg. Its chief constituents are sulphur and lime, and when these are abundantly supplied I have never known a failure. In eastern Virginia it is grown very successfully on lands which were originally sour and sandy, by a suitable application of marl. In South Alabama, Red Clover grows luxuriantly in the lime lands, the natural soil being sufficiently calcareous.

I have been raising Clover now some eight or nine years with decided success. My plantation is in Marengo county, in the lower or cane-brake lands, and in latitude near 32 deg. I find it unnecessary to re-sow it, as the seed which fall from the plant keep the land sufficiently supplied and well set. This a great convenience, as it saves the trouble and expense of frequent seeding, Clover being a biennial plant.

In England and on the continent, as well as in our own country, it is so common for land to tire of Clover, from mechanical as well as chemical causes, that the term "clover sick" has become a familiar designation for such lands. But I find my volunteer crops on land that has been continuously in Clover for eight or nine years, to be as luxuriant as the first crops.

I have clover lots from five to forty acres in extent. My fattening hogs are put up in January in the horse lots, where they are kept until they are slaughtered in the winter following. Adjoining these horse lots, are small clover lots, of four or five acres, to which the hogs are allowed unlimited access from May to November. The consequence is, that they are as fat during the entire summer as when they are slaughtered. As these lots adjoin the public road, and the hogs present so fine an appearance, nothing is more common than applications for a pair of pigs, to get into my breed of hogs.

My large lots furnish a supply of grazing, of the best quality, commensurate with my demands, for milch cows, brood mares and colts, idle horses, and beef cattle, during a large portion of the year. The first crop matures about the beginning of June, and if not grazed or mowed, it falls and rots on the ground, serving to benefit the land both by its shade, and a large supply of vegetable matter; and besides furnishing an abundant supply of seed. Although well advised as to the value of clover hay, I seldom save any, as the hoe crops at this period require all my labor. When not grazed in the winter and spring, it is allowed to rot on the ground.

The second crop makes its appearance as soon as the nights and mornings become cool, and about the same time a volunteer crop springs up, so that the two crops together furnish good grazing during the entire fall, and a large portion of the winter.

Let me here detail to you the amount

of grazing derived from a clover lot of five acres, the eighth year in clover, adjoining one of my horse lots. It may seem extravagant, (and it really does so to me, although it passed under my own observation) but is literally true, and can be so proved by the most respectable testimony if it were necessary. On the 15th day of December last, there were twenty-one calves, large and small, put up in this lot, and they continued on it until the first of May, when they were taken off as fat as seals. The same week, if not on the same day, in May, that the calves were removed, sixty fattening hogs were allowed access to this lot at will, from the horse lot adjoining. The hogs were shut out some two or three weeks ago, as fat as need be, in which condition they have been during the whole summer. The calves have been returned to this clover lot, and the clover has been gaining upon the hogs and calves since the first of October.

I find no difficulty in saving seed.—The heads are pulled off by hand, and in that state put away until sowed. The sower, when he performs his work, takes about a flour barrel of these heads per acre, rubs them well between his hands, and sows them as he would oats. This mode has always insured me a good stand. I believe that if all the hands of the plantation were turned in, they would save seed enough in this way for one hundred acres in a day. The seed are saved either from the summer or fall crop, as most convenient. I commenced the cultivation of Clover in the lime land, with a full faith in success, from the calcareous character of the land.—My chief object was the improvement of the land. It will doubtless be found invaluable for this purpose, as well as for grazing, but I have not yet tested its value as a regenerator. I made a beginning this fall by putting a clover lot of 15 acres in wheat as follows: the clover lay seven years, was turned under with a four-horse Eagle plow, going eight inches deep; two bushels of wheat, well washed and lined, were then sown to the acre, harrowed in lightly, and rolled with a heavy roller. Hill-side ditches were next cut two feet wide and two deep, and water furrows parallel to these ditches, made with the plow and hoe, eight feet apart. From such a preparation, may not a crop of some 25 to 30 bushels per acre be reasonable anticipated?

As I design to sow a good deal of Clover the ensuing winter, some of my present clover land will be cultivated in Cotton, and should the result be in any way remarkable, it shall be communicated.—I have tested the fact, which had been done before, that a good stand of clover will follow a crop of cotton on clover land.

In conclusion, Messrs. Editors, allow me to say, that I have made this communication from a hope that it will interest Southern Agriculturists, and direct their attention to a most valuable resource, and one which, if suitably cherished, must advance the comfort and prosperity of many large sections of the cotton growing region.

Very truly yours,

ISAAC CROOM.

Greensboro', Ala., Nov., 1852.

For the Farmer and Planter.

"The Art which nourishes all other Arts."

Is it not surprising, Messrs. Editors, to see so little attention paid by the government and the people to the education of those whose lives are to be devoted to the cause of agriculture, from which four fifths of us derive our support. Lawyers, physicians, and mechanics, are regularly taught the principles of their trade or profession, and also their practical application; but the votaries of the art upon which all others depend, are allowed to grope their way in darkness, alike ignorant of the principles of natural science and the elements of the soil, to the tillage of which, the labor of their lives is to be devoted. Is there no help for this? Is this noble cause to depend on the unaided efforts of yourselves and other devoted agriculturists, who are endeavoring to enlighten the public mind through the medium of public journals? I trust not, for no matter how much practical information you may afford them, or how intelligent you make them, the most important thing necessary will still be wanting.—a knowledge of the elements of the soil—the power to analyze it and detect its deficiencies, and then to combine with it what may be necessary to give it vitality and fertility.

To accomplish this, a knowledge of agricultural chemistry is necessary. How is this to be supplied? I fancy I hear one of our anti-book-farming wiseacres say, do you propose to make all the farmers in the State chemists! Not at all. But I would have the State, at the public expense, to employ a competent man, whose duty it should be to visit every neighborhood, and examine the soil and give the necessary information for its amelioration to the people.—Although every farmer might not avail himself of it, still I believe that a sufficient number would to give it a fair trial, and the successful result would induce the rest to come in.

In some such way as this must the end be accomplished, if it be accomplished at all. "Men are like sheep," said an old friend in our pres-

ence the other day, "when one breaks over the fence the others follow, and whether it be for better or worse they hardly ever return." I would have our farmer so be sure they are right before they go ahead, lest they might like my friend's sheep, never return to correct principles.

The wise and beneficent course pursued by the great Frederick of Prussia, is worthy of all praise, and presents a fitting example to the governments of this country. He introduced from other nations those branches of industry in which they excelled. And thus the rural economy and farming of England was adopted in his dominions. It was an English farmer, a man of science and sense, who first undertook, at the request of the Prussian monarch, to render the barren sands of Brandenburg available for the purposes of agriculture. He planted them in turneps and suffered the crop to rot on the ground, until a sufficient mould was created to grow different kinds of grass. These experiments were made on the king's domain, and at his expense, and afterwards were extended to the estates of different proprietors.

The empress, Queen of Austria, Maria Theresa, who was devoted to the improvement of agriculture within her kingdom, as well as all other arts, about the year 1663 formed an agricultural society in Milan, and distributed premiums to those of her people, who had the best improved farms and made the best crops, which tended greatly, we are told, to improve the agriculture of the country.

But in this enlightened day, and in this free country, no stimulant is given—no inducement is offered—no, not even the necessary information is afforded the agriculturist to enable him successfully to develop the fertility of the soil. Large expenditures of the public money are annually appropriated to sustain institutions of education in our state, in which the course of instruction is such as to fit men for every pursuit in life except agriculture. But this "art which nourishes all other arts" has no fostering care bestowed upon it, and only knows the government, which it mainly supports, by the exactions made from its hard earnings by the tax collector. Farmers is it not time to wake up and see to our own interests, which have been too long neglected for our own and the country's good.

A FARMER.

Sea Island Cotton.—The first seed of the Sea Island long staple cotton was sent from the Bahamas to Georgia in 1786, and the first experiments were made with it on the Sea Islands, near the mouth of the Savannah River. The plants did not bear the first year, but the winter proving mild, the rattoons bore fruit the year following, and thus became acclimated. The original seed came from Persia. The successful growth of this world-wide famous kind of cotton is confined to a string of islands, stretching from Georgetown, in South Carolina, to St. Mary's River, in Georgia, a distance

of nearly two hundred miles, including a belt of coast not over fifteen miles wide. Its culture is now being introduced into Florida.—*South Carolinian*.



The Farmer and Planter.

PENDLETON, S. C.

Vol. IV., No. 2. - - - November, 1853.

The Rev. THOMAS DAWSON, of Beaufort District, is appointed an agent of the *Farmer and Planter*.

H. P. DOUTHITT, of Alabama, is an authorized agent for the *Farmer & Planter*.

THE OCEAN BORN.—A Tale of the Southern Seas by S. A. GODMAN, Esq. We have not had time to examine this story, and cannot give our own opinion of its merits, but if we should judge by what is said about it by our brethren of the press, we should say it was a tale of rare merit and thrilling interest. The author will accept our thanks for the copy which he has sent us.

We welcome our old friend Broomsedge again to our columns, and hope he will find it convenient to favor us regularly with his interesting reflections. We know of no one of our contributors who writes with more grace and ease, or who more clearly elucidates the subject of which he treats.

This present communication is suggestive of matters of interest to the farmers of our country and cannot fail to attract attention. That dog law would vastly improve the sheep walks in this part of the country, and make mutton much more abundant and cheap. The number of dogs in the country is a crying evil, and calls for a corrective from some quarter. Will our Legislators take this matter in hand? We fear that they fear the dear people too much, altho' nine-tenths of them believe it is imperiously called for.

We concur fully in his views of the importance of the hay crop, even from our native grasses. We are of the opinion that the native grasses which grow on our branch and creek bottoms, are much better than any that grow naturally or can be cultivated successfully on up-land, in this part of the country. We fed our horses on this swamp hay last winter entirely, giving them no corn when not at work, and they kept in fine order during the season.

The question which our correspondent raises about snout in wheat is an interesting one, and we should like for some of our other contributors to give us their views upon it. What says

our old friend "Pry" to this—will he not come out of "winter quarters" long enough to give us his opinion on this subject? The time was when he and "Broomsedge" interested the readers of this journal by a discussion of another subject, and we should like to hear from him again. But it may be that they agree, if so they would prove a strong opposition to the advocates of the other side. We invite discussion on this and other subjects of interest to the husbandman. Let no one withhold his views or experience because he thinks he cannot write well enough to have them put in print. The truth is what is wanted.

Our readers will find an instructing article on the subject of "Fruit Trees" in this number of our paper. It was an original communication to the "Unionville Journal," and appears to be written by one who not only understands the culture of the apple, but also appreciates its value. We wish we could engage him to give the readers of the *Farmer and Planter* the benefit of his information and experience in matters appertaining to the orchard.

In this connection we will give our readers the result of an experiment made by a friend, two years since, to restore an orchard that had been neglected by the former owner, and allowed to grow up in broomsedge and briars. Our friend informed us that after clearing away the briars, and removing the sprouts and dead limbs, he introduced a scooter plow, and broke up the ground thoroughly, plowing lightly very near and under the trees; he then had the sedge removed, and put around each tree half-a-bushel of well-rotted manure, about a bushel of the scrapings from an old wood-pile, and to this he added about a peck of leached ashes. These were carefully mixed and scattered around each tree, and slightly dug in. The result was wonderful. The trees soon lost their stunted appearance, the foliage was thick and luxuriant, and the limbs grew during the season from a foot to eighteen inches in length, and the fruit was large fine and so abundant, that, of his winter apples, he put up in barrels with sand, enough to supply a large family of children the greater part of the winter. The trees, he informs us, are flourishing now and present no evidence of their former neglect. What a rich return for so little labor is this, and who could not have by taking a little trouble, not only fruit enough for themselves, but some to spare to their neighbors.

The Farmer and Planter.

In a recent notice (by request) of the *Soil of the South and Tropical Farmer*, by the Editor of our excellent exchange, the *Southern Planter*, he concludes as follows:

"By the way, it is a shame that the *Farmer and Planter* of Pendleton, South Carolina, is so inadequately supported that the editors think they shall have to merge it in a political paper. How can Southern rights men permit such a reflection on their patriotism, spirit and intelligence! How many gentlemen waste

money enough at Newport and other Northern sink-pockets to sustain a first rate agricultural journal at home! Let them travel if they will; and to the North as soon as elsewhere. It will improve them, and will give them, we hope, fraternal feelings towards people who are citizens of this great Republic and therein our equals. But let them learn, as they may by keeping their eyes open whilst abroad, that their first duty is to domestic interests; and the retrenchment of expenditure in a very few luxurious indulgences will give a fund of munificent contribution to languishing enterprises at home."

Thank you, friend Ruffin, for this voluntary notice and compliment to the Farmer and Planter. We have toiled on, without desponding, in darker days than these, and have no idea now when our prospects are improving of giving up the ship.

Gnano and Plaster on Corn and Clover.

We promised our subscribers to give them, in our present number, some account of an experiment made by us in the course of the last year, with Gnano and Plaster on corn and clover. The corn land experimented on, was ten acres of a field of about thirty—the whole much exhausted, and "turned out" some years since, and hence grown up in sedge and poverty grass. That part manured we considered the poorest part of the field. In the previous winter the land was plowed with one of Ruggles, Norse, & Mason's Centre draft plows, which run from 5 to 6 inches deep, and completely reversed the sod.—This plow was followed by a one-horse sub-soil gopher, which run some three or four inches deeper, making in the whole from eight to ten inches. The soil of the part experimented on, is somewhat light, having a due admixture of sand. The subsoil a stiff red clay. The land thus prepared lay until the usual time of planting, when it was laid off with a short narrow plow, at a distance of five feet distance, and in this furrow, the corn was planted three feet apart on the row, and covered by ridging lightly on it; care being taken not to disturb the light coat of vegetable matter that had been buried by the turning plow. And we will here state that, for the same reason the crop was cultivated altogether superficially with the cultivator and sweep, one time each, with one hoeing. Mark this brother farmers, and reflect how much labor might be saved in the culture of our crops by properly preparing the land. For we assure, you from our own experience, that land having but a light coat of vegetable matter on it, thus prepared will need no plow in cultivating the crop—for, even if it is stiff and adhesive, it will not run together so as to require a second, third, or fourth breaking, except the crust that forms on the surface, which may, and should, be broken with a cultivator, harrow, or sweep, only; and with either of which the ground may be passed over

rapidly and with comparatively light labor to both man and horse. Excuse this digression, and we will proceed to state how our manure was prepared, applied, and the result. In preparing our compost we used the Peruvian gnano and plaster of Paris, ground, coal dust, or rather the scrapings from the coal-house floor, which was passed through a coarse grain sieve, and leached ashes, in the following order and proportions. First, a bushel of coal dust (as we shall term it) spread to about two inches thickness; second, one gallon ($\frac{1}{2}$ peck) gnano, spread uniformly over the coal bed; third, the same quantity (probably twice as much as was necessary) of plaster; fourth, one bushel of coal dust; fifth, half a bushel of leached ashes. The same course was continued until the quantity of gnano and plaster procured was exhausted. The heap thus formed, remained undisturbed for two weeks, when it was shovelled over—which we were convinced at the time should have been done earlier, in order to prevent the setting of the plaster, which we were not able again to reduce to a powder. This setting we presume was occasioned by the moisture imbibed from the damp coal dust, and might have been prevented by shovelling over the heap immediately after it was finished.

THE APPLICATION.—Of this mixture we spread in a circle of 18 to 24 inches diameter, around each hill of corn, when from six inches to a foot high, one jill, and followed with a light running cultivator, as near on each side of the corn as could be not to tear it up. This partially covered and mixed the compost with the soil. In this state it was left, though a drought of some weeks, without much apparent benefit. After the first rain, however, we saw that the corn was taking the start of that in the same field not manured. It continued to gain on it to the maturity of the crop, and resulted in a gain of 33 per cent. over the unmanured portion. Which was ascertained by gathering two rows manured, leaving two, one manured and one unmanured, and gathering the next two unmanured. The corn was measured in the ear only, and the manured rows not only measured more, but was better in appearance than that from the unmanured rows.

By calculation it will be ascertained that the quantity of both gnano and plaster applied to the hill, was but the one eleventh part of a jill, or one twenty-second part of a jill of each. Consequently, there being 2924 hills, five by three, in an acre, it will only require about half a bushel of each gnano and plaster to an acre.

CLOVER.—Of the above mixture we spread five and a half bushels on one acre of red clover, which was equal to a peck each of gnano and plaster, and which resulted in a most decided improvement of the crop. We regret that we did not leave a portion unmanured that we might have ascertained the difference in the product. Judging from appearances however we have little doubt but that it was doubled by the application.

Every purpose is established by counsel.

Our friend M. L. B., of Edgefield, in a letter enclosing his yearly subscription, concludes as follows: "I read your paper with much interest. Can't you stir up the racy pen of 'Broomsedge' to a few more strokes at the dogs.—There are three times as many dogs in South Carolina as he allows, and ten times as many as are useful." Our correspondent will be gratified to see that "Broomsedge" is down upon these canine misdeeds again in this number.—We would be highly pleased if our Edgefield friend would enter the list with his own able pen on this and other subjects; and, by the way, if report speaks truth, there is no part of the country that is more overrun by the worst species of these animals, than his own neighborhood.—We were informed by a friend, not long since, who travelled with his family from Aiken to the mountains in the month of June, that his servants came very near on several occasions, in calling for water for his family, of being torn to pieces by those broad jawed monsters, yeelp bull dogs. He informs us that they were in the streets, at the corners, and in the high-ways, and at the farm-houses in the country. If this be true, it would seem that our Edgefield friends care but little for that gentleness so characteristic of the *Lamb*.

The days are passed when the fox hunting Squire, who could blow the loudest blast on his horn and jump the highest fences, was the most renowned man in his neighborhood. The world is *utilitarian* now, and he who improves to the best advantage the gifts which the God of nature has spread before him, has taken his place, and properly too.

We intend to publish and write on the subject until something is done to abate the nuisance, and if our farming friends are true to their own interests, and will unite, they can command the remedy. We met a few days since, in one of our rambles, a man with four large curled-tail curs at his heels, either of which was quite sufficient to the task of destroying a flock of sheep in one night. Now if these dear creatures were subject to a tax, he would soon find out that he could do without them, and also find more bread for his children.

For the Farmer and Planter.

MESSRS. EDITORS:—As you have invited all of your subscribers to write for your paper, I avail myself of the privilege accorded to all, not to indite an article on farming, but to retail a conversation I heard the other day, by way of showing the difficulties you have to contend with to the intelligent readers of your paper, which, I hope, will be an inducement for them to come up liberally to your support with their pens and money.

I was sitting quietly by the fire, smoking my pipe, in a hotel in a village not a hundred miles from Pendleton, when two friends came in who had met after a long separation. After being comfortably seated, Sam inquired of Ben what was the

news down in the old settlement (it appeared that Sam when a boy, had boarded with Ben's father and they had gone to school together). "Strange times down there, I can tell you, Sam, you wouldn't know the country, every thing is so changed."

"Ah! how is that Ben?"

"Why you've heard of Dan W., hav'n't you?"

"Yes."

"Well he came up there two years ago, and he bought old Mr. B.'s place, and he bought old Mr. C.'s place, joining, and he put it all together, and filled his plantation with negroes and mules, and of all the new notions of farming, you never saw the like."

"Well let us hear."

"Why, he has the most curious plows you ever saw. He turned over all the broomsedge with large plows, with four horses; and, in my opinion, has covered up the little soil that was left on the old fields so deep, that he will never hear of it again. And then he has what he calls a sub-soil plow, with which he tears the very ribs out of the earth, and in my opinion will let down the strength of the soil so low, that the roots of the cotton and corn can never reach it. It would do you good to see his fences, too, why he has made them so high that a dog can't jump over them—there is no letting down gaps there now, I can tell you; and, the lord, if you could only see how he has ruined and wasted that good land, by what he calls "guard drains"—it would make you sorry for the folly of the creature—I may say he has gullied it all over, and wasted at least a third of it. I understand that there is a man by the name of Seaborn, that publishes a paper at old Pendleton that teaches all these things, though I never saw it. I can tell you one thing however, Sam, and it is this, that that paper is in a fair way of ruining the country with its book farming, and if it can't be stopped in no other way, it ought to be done by law."

"I say, Sam, you know I have been raised on a farm, and worked all my life, and I think I know as much as any of them."

"You ought, Ben."

"Well I will just tell you my opinion. This whole plan is against nature. I think if God had intended the soil should be at the bottom instead of the top, he would have put it there at first; then if it had been right that the earth should be soft for eight or ten inches deep, he wouldn't have put the stiff clay under the soil. But did not God make the hollows to carry off the water, and has't he provided a way for every thing, and this man is trying to defeat his plans. To try and pervert the laws of nature after his fashion, amounts to downright wickedness, in my judgement."

I left after this Messrs. Editors, disgusted with the ignorance and prejudice with which you have to contend. This is no sketch of fancy, but is substantially and almost literally true—and the man, too, was one from whom better things might have been expected. SPECTATOR.

For the Farmer and Planter.

MESSRS. EDITORS:—In the beginning of last year, I gave an account of Mr. Saunders' system of planting and cultivating corn, which you published in the Farmer and Planter. I have tried his system the past season, and am confident if the plan laid down by him was strictly adhered to, it would produce similar results in almost any part of the State. My experiment was conducted upon an old field which was badly worn, that had been taken in the year previous, and planted in corn and barely made five bushels per acre. I bedded it up with scooters on the old beds, and then run a twister twice in each row in the middle. I had previously raked up a large quantity of leaves and the surface of the earth, set fire to the piles, burnt and chared the leaves. In February I hauled out 700 loads, deposited in the furrow, and soon after covered with a twister. It remained in this condition until the first week in March, we then opened this list lightly with a small scooter, planted the corn with a compass 33 inches wide, and then covered it by running a twister furrow on each side. It remained in this condition eight or ten days, by this time the corn was sprouted an inch or two long. We then scraped the list with a board, and the corn was soon up beautifully. It remained in this condition eight or ten days longer, at which time we run a furrow on each side of the corn, as shallow as possible, with a short twister, and plowed out the middles with a scooter, close and deep—the hoes followed and levelled the earth around the corn and removed the clods and trash from it. In about two weeks we run a furrow around the corn again with a winged scooter, lapping the earth around the corn. It remained in this condition some twelve or fifteen days, and was run round again, taking only a small portion of earth from the middle with a Twister, and throwing the earth close up to the corn, and covering the peas, which were dropped between the hill in a chop made with the corner of a hoe. The balance of the row was finished by plowing out a furrow every twelve or fifteen days with a twister. It received no more work, only to chop out the weeds and bushes, with a Hoe. The seasons were as good as could be desired, and the corn was heavy and large, and was variously estimated by my neighbors from twenty to twenty five bushels to the acre. I am satisfied it made at least twenty bushels per acre. I now have a heavy crop of pea-vines on the land, and I intend to open a deep furrow in the middle with a twister, and bury stalks and pea-vines in it, and also bed on the list where the leaves were buried the past year, and plant cotton the present year. I am well apprised that no one experiment should be taken as conclusive evidence of its utility, as our seasons are so uncertain—but Mr. Saunders system has much to recommend it to public favor—first it opens a deep furrow in the subsoil, which is filled up with vegetable matter and manure which de-

composes gradually through the season, and thereby furnishes food for the corn at an important time, when it is earing. The plowing is done close and deep, only taking half a slice at each furrow, and I am fully persuaded in my own mind that after cultivating a field two or three years in corn and peas, and laying it by clean, keeping stock entirely from it, the crop would increase annually and the product would double the usual crops made on similar lands, besides it would save a great deal of plowing, thereby lessening the expense of keeping and feeding so many horses. I repeat it, that it is all important to open a deep trench, or furrow, and put in all the manure that can be had and cover it, which is subsoiling the land effectually, and making a place to retain the moisture, which I believe to be the true secret of Mr. Saunders success.

I am yours &c.

THOS. B. BYRD.

How to keep Poor.—Buy two glasses of ale every day, at five cents each, amounting in one year to \$36; smoke three cigars, one after each meal, counting up in the course of the year to \$54 75; keep a big dog, which will consume at least \$13; worth of provisions, and a cat \$5 more. Altogether, this amounts to the snug little sum of \$110 25—sufficient to buy six barrels of flour, one barrel of sugar, one sack of coffee, a good coat, a respectable dress, besides a frock for the little baby, and a half dozen pair of shoes—more or less.—Just think of it.

The Sun Flower.

The sun flower is a plant of much greater value than is generally known. Instead of a few being permitted to grace a parterre, and considered only as a gandy flower, experience warrants my saying it should be cultivated by every planter and farmer as a part of his provision crop. It can be turned to profitable account on all plantations; in as much as it can be made to yield more to the acre in exhausted soils, with little labor, and with greater prospect of success.

Its seed is wholesome and nutritious food for poultry, cattle and hogs, and very much relished by them.

From the seed an oil is obtained with great facility, as delicate, it is believed, as that of olives.

They are also pectoral. A tea made of them is quite as effective as flax seed, or any other, in catarrhal affections. On one occasion this tea, sweetened with honey, was of so much more service to me than the prescription of my physician, that I attributed my early restoration to health to its agency alone. Certainly a favorable change did not occur till I used the tea, which I did upon the recommendation of a citizen of one of the upper counties of North Carolina.

Its leaves and stalk, in a green state are preferred by cattle to any other provender. I have thrown green grass and fodder in one heap, and sunflower leaves in another, to try the cattle, and they have even commenced eating the latter first; this I have tried often with the same result. The whole, cut up in the green state and boiled with cottonseed, or a little meal, affords a delicious food for cattle and hogs.

A Beautiful Idea.—I cannot believe that the earth is man's abiding place. It cannot be that our life is cast up by the ocean of eternity to float for a moment on its waves and sink to nothingness. Else why is it that the glorious aspirations that leap like angels from the temple of our hearts, are forever wandering about unsatisfied? Why is it that the rainbow and the cloud come over us with a beauty

that is not of earth, then pass off and leave us to muse upon their native loveliness? Why is it that the stars who hold their festivals around the midnight throne are set above the grasp of the limited faculties, forever mocking us with their unapproachable glory? And finally, why is it that the bright forms of human beauty are presented to our view and then taken from us, leaving the thousand streams of our affections to flow back in Alpine torrents on our hearts? We are born for a higher world than that of the earth.—There is a realm where rainbows never fade where the stars will be put before us, like islets that slumber on the ocean—and where the beings that pass before us like shadows will stay in our presence forever.

Clover Seed—It is stated on good authority, that 9,033 clover seed are contained in one cubic inch, thus equalling 19,466,561 seeds in a bushel. As an acre of ground contains 43,560 square feet, we have only to multiply it by 144, being the number of square inches in a foot, and we shall readily see the amount of clover seed necessary to sow an acre. If seed per square inch is allowed, tillering will be found sufficient to ensure a good crop.—*Working Farmer*.

Advice to the Ladies.

Young ladies, you caged birds of beautiful plumage, but sickly looks—you pets of the parlor—vegetating in the unhealthy shade, with a greenish white complexion, like that of a potato sprout in a dark cellar—why can't you go out in the open air and warm sunshine, and add lustre to your eyes, bloom to your cheeks, elasticity to your steps, and vigor to your frames? Take early morning exercise—let loose your corset strings, and run up hill for a wager, and down again for fun. Roam in the fields, climb the fences, leap the ditches, wade the brook, and go home with a good appetite. Liberty, thus exercised and enjoyed, will render you healthy, hearty, blooming and beautiful—as lovely as the Graces, and as prolific as Deverra. The buxom, bright-eyed, rosy-cheeked, full-breasted, bouncing lass—who can darn a stocking, mend trowsers, make her own frocks, command a regiment of pots and kettles, feed the pigs, milk the cows, and be a lady withal in company—is just the sort of a gal for me, or for any man; but you ye pining, moping, lolling, screwed up, wasp-waisted, doll-dressed, putty-faced, consumption-mortgaged, music-murdering, novel-devouring daughters of fashion and idleness—you are no more fit for matrimony than a pullet is to look after a family of fourteen chickens. The

truth is, my dear girls, you want, generally speaking, more liberty, and less fashionable restraint—more kitchen, and less parlor—more leg exercise, and less sofa—more frankness, and less modesty—more corned beef, and less cersets—more breakfast, and less bishop. Loosen yourselves a little, enjoy more liberty and less restraint by fashion. Breathe the pure air of freedom, and become something nearly as lovely and beautiful as the God of Nature. So spake Dow, Jr., whose voice of pithy sayings shall no more be heard.

A friend says that the first thing that turned his attention to matrimony, was the neat and skillful manner in which a pretty girl handled a broom. He may see the time when the manner in which that broom is handled will not afford him so much satisfaction.

The wives along the Mississippi river never blow up their husbands. They leave that to the steamboats.

How to "FINISH" A DAUGHTER.—For the attainment of this end Punch gives the following directions:

1. Be always telling her how pretty she is.
2. Instill into her mind a proper love of dress.
3. Accustom her to so much pleasure that she is never satisfied at home.
4. Allow her to read nothing but novels.
5. Teach her all the accomplishments, but none of the duties of life.
6. Keep her in the darkest ignorance of the mysteries of house-keeping.
7. Initiate her into the principle that it is vulgar to do anything for herself.
8. To strengthen the latter belief, let her have a lady's maid.
9. And lastly, having given her such an education, marry her to a clerk in the Treasury, upon £75 a year, or an ensign that is going out to India.

If, with the above careful training, your daughter is not finished, you may be sure it is no fault of yours, and you must look upon her escape as nothing short of a miracle.

Coffee.

Here are some facts worth knowing.—Read and ponder them well. The generality of families make their coffee too weak, and use too much sugar, which often causes it to turn acid on the stomach. Almost every housekeeper has a peculiar method of making coffee; but it never can be excellent unless it be made strong of the berry. And make it as you will, strong or weak, sweet or bitter, unless it is properly roasted, it will be a miserable unwholesome beverage. If it be underdone, its virtues will not be imparted, and in use it will load and oppress the stomach; if it be overdone it will yield a flat, burnt and bitter taste; its virtues will be destroyed, and in use, it will heat the body, and act as an astringent. The closer it is confined at the time of roasting, and till used, the

better will its volatile pungency, flavor and virtues be preserved. Count Rumford, a gentleman of science, taste, skill, judgment and ability, to say the truth, says:—"Coffee may be too bitter—but it is impossible that it ever should be too fragrant. The very smell of it is reviving, and has often been found to be useful to sick persons, and to those who are afflicted with the headache. In short, every thing proves that the volatile, aromatic matter, whatever it may be, that gives flavor to coffee, is what is most valuable in it, and should be preserved with the greatest care, and that in estimating the strength or richness of that beverage, its fragrance should be more attended to, than either its bitterness or astringency. This aromatic substance, which is supposed to be an oil, is extremely volatile, and escapes into the air with great facility, as is observed by its filling the room with its fragrance if suffered to remain uncovered, and at the same time losing much of its flavor,—and he might have said, by long exposure, will lose all its valuable qualities.

To make nice Jelly.—Tart apples or quinces make the nicest jelly that I know of. Pare, cut and boil cores and all, as if to stew for sauce; then let them drip through a clean flannel bag, taking care not to squeeze them; when done dripping, measure the juice and add an equal measure of nice sugar, and simmer slowly until done, in a clean brass or copper vessel.

E. A. W.

Green Hill, Amherst county, Va.

Narrow Minded Men.—Merchants who do not advertise are close and narrow minded in their views, and a perfect type of the greedy impatience of the fellow who in order to realize a fortune by a single operation, killed the goose that laid the golden eggs. The same morbid contractedness of interest in advertising, is akin to that of the farmer who stunted his land to half the quantity of seed necessary to produce a full crop, under the expectation of an abundant harvest. As a general rule, those who are wanting in the liberality necessary to make their business extensively known, will not hesitate to skin every customer who comes within their reach. Ladies are sagacious.—They know who advertise, and who do not, and they never expect a bargain in a nonadvertising establishment. So, too, with men. They say the man who does not advertise his goods, has nothing worth advertising, or if he has and does not, he is a skinflint, and it is better to keep out of his clutches.—*Black River Watchman*.

Light Bread.—Here is a new way of making light bread, which we hit upon by mere accident at first, but now never try any other way, as we consider this bread equal to that raised by yeast of any kind. Make up the bread by using soda, sour milk, and a little shortning, just as if for biscuit, and let your bread stand in a warm place for several hours, to rise. I rub the soda in the flour, then the shortning of which a small quantity will do, and add butter-milk until the whole is wet up. If the milk is very sour of course more soda is necessary; if new, a small portion will do.—*Baltimore Sun.*

Frozen Potatoes.—the Rural New Yorker says that a potato, if frozen, and instantly put into cold water, does not recover, but is totally changed, and becomes a flaccid sack of unsavory, gummy matter, of a very disagreeable odor—its original properties entirely changed or lost; but if, while in a frozen state, they are thrown one by one into water constantly boiling, they are no way affected, and are as edible as when first taken from the earth. This is an anomaly to the action of the cold, which may be true when applied to other vegetables, of which we are unadvised, but it is a fact worth knowing, as it may on some occasion meet the necessities of almost every family, especially in those countries where cellars are difficult of construction.

Waste.

A source of waste with the farmer, and a very fertile one, is in the consumption by his domestic animals, of the several agricultural products appropriated to their sustenance and fattening. After all the toil and expense attending their production, from our comparatively hard soil, it would seem that the utmost economy would be exercised in their distribution and use—but such, I am sorry to say, is not the fact.

As hay is the most abundant of our agricultural product, so the greatest amount of waste is suffered in its composition, and while many a farmer imagines that he uses the greatest economy by compelling his cattle to eat clean what is placed before them, by persisting in keeping it there, their appearance often indicates that in the “long run,” as it is called, his economy is not a wise economy.

The great secret of feeding stock is, 1st, to ever secure them a good appetite, and 2d, to make their food, whatever it may be, inviting and palatable. Many

fail in the first requisite by their over-anxious desire that their animals shall never suffer from hunger, and are almost constantly throwing them a little hay or a bundle of corn-stalks, that they may not want for food—the consequence is they are never really hungry, and their stomachs are kept in an unquiet and irritable state, very detrimental to a good digestion. To ever insure a good appetite and a good digestion, it is absolutely necessary that a great degree of regularity is practised in giving food, and that stock should have their periodical meals, as constantly and at the same intervals as men, and should never be fed between meals. This, while in health, will ever insure them a good appetite and prepare them for the second requisite, inviting and palatable food.

Having then your stock before you, with keen appetites, and waiting with eager and expectant eyes their usual instalment of food, how shall it be placed before them, the best to please their fancy, and insure its entire consumption? Most domestic animals (like their masters) are observed to be pretty good epicures, and when a portion of hay is given to them, first give it a toss, and then draw it towards them to select the best morsels. Now it is important, in view of this disposition, that a small portion be given them at once, and that portion finely shaken up. Many persons will throw a large forkfull just as it comes from the mow, and the consequence is, that the animal in throwing it about and shaking it up, gets portions of it under its feet and ruins it for consumption. Another great objection to giving large quantities, is, that in tossing it about, it becomes impregnated with the odor of the animal's breath and consequently much less palatable to the taste. This last is peculiarly applicable to working animals which are often put into the stall, not only in a profuse perspiration, but breathing and panting vehemently, and at the same time a large quantity of hay given them—the consequence is, as might be expected, that their food becomes so much affected by the exhalations from their bodies and lungs, that it in many cases becomes positively nauseous to them, and consequently is not eaten, producing much waste. Working animals should always have time to cool off and breathe a little before they are fed, on this account, and farther, in order to secure a good digestion, for all physiologists agree that eating while hot

and excited is injurious alike to man and beast.

The writer learned a lesson in his youth, or rather suffered for lack of knowledge, which he will not readily forget, upon the subject of feeding animals while warm. His employer owned a very fleet mare, said to be of Arabian breed, and which he was accustomed to drive at times most unreasonably fast. Returning home one night quite late, after a drive of some twenty-five miles, the mare puffed like a small steam engine, and dripped with sweat and foam, and instead of being hitched one side and rubbed until cool, she was put into the stall and bountifully fed, and the writer retired ignoiently to bed, feeling that he had faithfully performed all the duties required in the case. Upon the next morning (as might have been expected) the mare appeared as gaunt as the ribs of death, and upon being seen by her owner, while being curried, the writer was vehemently accused of not feeding her the previous night, and though he appealed to the large quantity of hay still in the rack and under foot, to prove his faithfulness, the owner persisted in his charge of unfaithfulness, causing an untold amount of mental anguish for days, and it was not until years after that he learned the secret of the proper feeding of domestic animals.

Another source of waste with many, is the continued practice of feeding grain in its raw and unground state. Many still insist that Indian corn upon the ear, fed to swine makes harder and better pork. This I think an error of some magnitude, and one of which there is no extenuation, for it seems that any one reflecting one moment upon the subject, will see at once that any substance containing nutritious principles, will part with those principles more readily and effectually by reducing such substances to the finest state consistent with due economy, and also to scald or otherwise cook them in order that digestion shall be as rapid and perfect as possible. This cannot be obtained by feeding raw and unground, for none can have failed to observe, that much of the unground grain fed to hogs and oxen, passes through them whole, without the process of digestion having been gone through with at all, and of course parting with none of its nutritious principles, and is therefore an utter waste.

[*New England Cultivator.*

AGRICULTURE is the Art of arts.